



## Department of Energy

Washington, DC 20585

August 29, 2000

Mr. Robert Wayland, Director  
Office of Wetlands, Oceans, and Watersheds  
Mississippi River/Gulf of Mexico Action Plan (4503F)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Re: Notice of Availability and Request for Comment on  
Draft Plan of Action for Reducing, Mitigating, and  
Controlling Hypoxia in the Northern Gulf of Mexico

Dear Mr. Wayland:

The U.S. Department of Energy (DOE or the Department) takes this opportunity to comment on the referenced notice, published by the U.S. Environmental Protection Agency (EPA) on July 11, 2000 (65 FR 42690). The Department generally supports programs leading to improved water quality in the Gulf of Mexico. We are particularly interested in the elements of the draft action plan that would restore coastal wetlands in Louisiana and other areas Gulf coast areas. We would like to make you aware of an approach DOE has supported to use cleaned drill cuttings (ground up rock fragments created by an oil and gas well drill bit) as a substrate to restore wetlands. This approach would restore wetlands at no additional cost to the government or the public. Unfortunately, the Department has encountered regulatory barriers that have prevented a preliminary field trial. DOE is hopeful EPA would provide a straightforward mechanism that would allow us to demonstrate the feasibility and validity of our approach.

### DOE's Approach for Restoring Wetlands Using Treated Drill Cuttings

The Department's Office of Fossil Energy supports innovative research to minimize oil and gas production costs while protecting the environment. Several years ago, we funded a demonstration project with Greenhill Petroleum, a small oil and gas producer, to evaluate the feasibility of taking drill cuttings, treating them to remove any undesirable properties, and using them as substrate to restore wetlands. This approach would take a waste product and beneficially reuse it to provide mitigation for a pressing environmental problem facing coastal Louisiana -- loss of wetlands. Greenhill worked with the Southeastern Louisiana University, which conducted extensive laboratory tests to demonstrate that the treated drill cuttings would support the growth of wetlands vegetation on a basis comparable to other dredged material commonly



used for wetlands restoration. Copies of the University's report<sup>1</sup> are available upon request. Following is a description of the difficulty Greenhill experienced in obtaining permits to conduct the field trail of this project.

### Project History

Greenhill applied to the Army COE on November 27, 1995, for a Clean Water Act Section 404 permit (dredge and fill activities) to fill in a former drilling slip in the marsh near Venice, Louisiana to create a new area of wetlands. The plan was to use dredged material to create berms to form an isolated cell, and then fill that cell with a blend of dredged material and drill cuttings. As part of the Section 404 review process, various agencies were provided an opportunity to comment on the application. On December 19, 1995, the Louisiana Department of Environmental Quality (Louisiana DEQ) wrote to Greenhill, stating that discharging drill cuttings to wetlands areas is not permitted without an exception from the EPA's Region 6 office in Dallas. In a January 29, 1996, letter to the Army COE, EPA Region 6 commented on the application stating, "although the discharge may be permitted as the discharge of 'fill material' for the purpose of creating marsh, the EPA is concerned that there is not sufficient information to make a reasonable judgement as to whether or not the proposed discharge will comply with EPA's 404(b)(1) Guidelines." In a January 22, 1996, letter to the Army COE, the U.S. Department of the Interior, Fish and Wildlife Service objected to placing drill cuttings into marshland unless the permit required metals analysis of site sediments and drill cuttings before fill emplacement.

In a March 5, 1996 letter to the EPA Region 6 National Pollution Discharge Elimination System (NPDES) Permits Branch, the Army COE asked EPA to "determine if you concur with our assessment of the application being subject to Section 402 jurisdiction (NPDES program)." On March 13, 1996, the NPDES Permits Branch responded, stating that EPA concurred, and that Greenhill's proposed project "is subject to Section 402 jurisdiction." EPA also stated that "cuttings from wells adjacent to the site of the proposed project would be covered by NPDES General Permit LAG330000 which prohibits the discharge of drill cuttings to Waters of the U.S." On April 4, 1996, the Army COE wrote to Greenhill advising "the portion of the project involving the discharge of drill cuttings will be under the jurisdiction of the EPA."

After making this jurisdictional decision, the Army COE withdrew from the project. Because EPA's NPDES Permits Branch determined that the proposed activity must be covered under an NPDES permit, the project was impeded. Both the current NPDES General Permit LAG330000 and the national EPA effluent guidelines prohibit discharge of drill cuttings to coastal waters. The marsh areas where Greenhill's project site is located are considered coastal waters.

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<sup>1</sup> Shaffer, G.P., M.W. Hester, S. Miller, D. J. DesRoches, R.F. Souther, G.W. Childers, and F. M. Campo, 1998, "Restored Drill Cuttings for Wetlands Creation: Results of a Two-Year Mesocosm Approach to Emulate Field Conditions under Varying Hydrologic Regimes," prepared by Southeastern Louisiana University Wetlands Restoration Laboratory, Hammond, LA, for U.S. Department of Energy, National Petroleum Technology Office, July 27.

On August 27, 1996, the Louisiana DEQ received NPDES program delegation. Greenhill hoped the State agency would be more receptive to the Section 404 permit idea than EPA had been. Louisiana indicated support for the wetlands restoration project, but stated it would follow EPA's position. In a May 29, 1997, letter to the Louisiana DEQ, EPA reiterated its position that NPDES Permit LAG330000 prohibited the discharge of drill cuttings and that the proposed Greenhill project constituted a discharge of drill cuttings. On June 19, 1997, Louisiana DEQ notified Greenhill that it could not authorize the proposed discharge.

In 1997, DOE asked Argonne National Laboratory to explore possible ideas to surmount regulatory barriers that had stalled the Greenhill project. Argonne contacted EPA's Office of Reinvention, and was referred to the reinvention coordinator for EPA Region 6. The coordinator indicated the only regulatory mechanism for this project was a program known as Project XL. Because Project XL is a process with extensive liability requirements and is far more rigorous than a traditional Section 404 wetlands permit, the DOE project team was unable to meet all the program requirements, and has discontinued attempts to obtain permits in this country. Argonne and DOE jointly presented a paper describing this process at a recent international conference.<sup>2</sup> We will make copies of this paper available to EPA upon request. We are working with the Mexican and Venezuela governments to explore the possibility of conducting field trials in those countries.

### New Opportunities

The draft action plan refers to wetlands restoration and creation programs funded through various Federal agencies, including the U.S. Department of Agriculture, Fish and Wildlife Service, EPA, the National Oceanographic and Atmospheric Administration, and the Army COE. These programs are expensive and cannot come close to restoring the number of wetlands that are currently being lost each year. The Department encourages EPA to take a close look at our approach for restoring coastal wetlands at no cost to the government or the public. The approach offers an uncommon win/win/win opportunity. The environment would win because a waste product that normally would be hauled to shore for land disposal would be treated to remove undesirable properties and reused to restore wetlands. Government would win by demonstrating the flexibility to embrace innovative ideas to solve environmental problems. Oil and gas operators would win by using this cost-effective waste management solution while demonstrating their commitment to environmental stewardship.

This DOE approach may be criticized as an attempt to allow oil and gas operators to dump drilling wastes into pristine wetlands areas. That is not the case for two reasons. First, drilling wastes would be treated to meet acceptable standards before being introduced into the wetlands areas. Second, they would not be casually dumped at random locations but rather would be properly emplaced at selected, permitted sites with extensive regulatory oversight and long-term monitoring.

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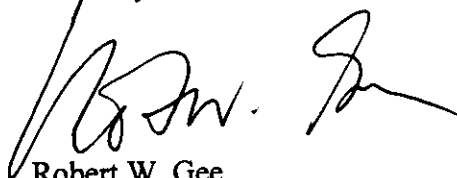
<sup>2</sup> Veil, J.A., N. Johnson, and J.K. Ford, *Restoration of Coastal Wetlands Using Treated Drill Cuttings*, SPE 61097, Society of Petroleum Engineers International Conference on Health, Safety, and the Environment, Stavanger, Norway, June 26-28, 2000.

The Department requests EPA consider the extent to which a waste material must be treated or processed before it can be considered a solid byproduct with its own value rather than the native waste material. For example, if operators treat drill cuttings so that the resulting solids meet all acceptable standards, could the solids be reclassified as a product (e.g., Nu-Marsh or MarshRestore) that could be used under a Section 404 permit? This idea may lead to a favorable interpretation that would allow for demonstration of the proposed DOE project as a pollution-prevention process.

We would like the opportunity to conduct a few well-documented field pilot studies to demonstrate that the described approach works in the field. We would be happy to work with EPA, the Army COE, and Louisiana State agencies to select sites and develop methodologies. We ask for support from your office for our approach.

If you have general questions regarding these comments, please contact Susan Gregersen at 202/586-0063, or by e-mail at [susan.gregersen@hq.doe.gov](mailto:susan.gregersen@hq.doe.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'R. W. Gee', followed by a flourish.

Robert W. Gee  
Assistant Secretary  
for Fossil Energy